

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (Original) A method of establishing a call in a wireless network, comprising:
2 sending a request for a packet-switched call over the wireless network; and
3 communicating control signaling in a traffic channel of the wireless network to
4 establish the packet-switched call.

1 2. (Original) The method of claim 1, wherein sending the request comprises sending
2 the request in a random access channel.

1 3. (Original) The method of claim 2, wherein sending the request comprises sending
2 a predefined code in a random access channel of an Enhanced General Packet Radio Services
3 system.

1 4. (Original) The method of claim 3, wherein sending the code comprises sending
2 the code in a channel selected from the group consisting of a RACH, PRACH, and CPRACH.

1 5. (Original) The method of claim 1, further comprising retrieving a pre-assigned
2 code to send in the request.

1 6. (Original) The method of claim 5, wherein retrieving the pre-assigned code
2 comprises retrieving a random access channel mobile station code.

1 7. (Original) The method of claim 1, wherein communicating the control signaling
2 comprises communicating the control signaling in a packet data traffic channel.

1 8. (Original) The method of claim 7, wherein communicating the control signaling
2 comprises communicating the control signaling in PDTCH bursts of an Enhanced General Packet
3 Radio Services system.

1 9. (Original) The method of claim 7, wherein communicating the control signaling
2 comprises communicating the control signaling in a packet data traffic channel mapped to a
3 dedicated physical channel.

1 10. (Original) The method of claim 9, further comprising communicating bearer
2 traffic in another traffic channel mapped to the dedicated physical channel.

1 11. (Original) The method of claim 10, wherein communicating the control signaling
2 comprises communicating the control signaling in a PDTCH, and wherein communicating the
3 bearer traffic comprises communicating the bearer traffic in a TCH, the PDTCH and TCH
4 defined according to an Enhanced General Packet Radio Services protocol.

1 12. (Currently Amended) The method of claim 1, wherein communicating the control
2 signaling comprises communicating Session Initiation Protocol messages in the traffic channel.

1 13. (Currently Amended) The method of claim 12, wherein communicating the
2 control signaling comprises communicating a Session Initiation Protocol Invite request in the
3 traffic channel.

1 14. (Original) The method of claim 1, further comprising sending a release message
2 to terminate the packet-switched call in a traffic channel.

1 15. (Currently Amended) The method of claim 14, wherein sending the release
2 message comprises sending a Session Initiation Protocol Bye message in the traffic channel.

1 16. (Original) The method of claim 1, further comprising sending quality-of-service
2 related messages in a traffic channel.

1 17. (Original) The method of claim 16, wherein sending the quality-of-service related
2 messages comprises sending Resource Reservation Protocol messages.

1 18. (Original) The method of claim 1, wherein communicating the control signaling
2 comprises communicating the control signaling in PDTCH bursts, the method further comprising
3 communicating bearer traffic in TCH bursts.

1 19. (Original) The method of claim 1, wherein communicating the control signaling
2 comprises communicating the control signaling in PDTCH bursts, the method further comprising
3 communicating bearer traffic in PDTCH bursts.

1 20. (Original) An article comprising one or more storage media containing
2 instructions that when executed cause a controller to:

3 send control signaling to request a channel for a packet-switched call over a
4 wireless network; and

5 add a predetermined code into the control signaling to identify the call as a
6 packet-switched call.

1 21. (Original) The article of claim 20, wherein the instructions when executed cause
2 the controller to send the control signaling selected from the group consisting of RACH,
3 PRACH, and CPRACH.

1 22. (Original) The article of claim 20, wherein the instructions when executed cause
2 the controller to further communicate packet-switched call control signaling in traffic channels of
3 the wireless network.

1 23. (Original) The article of claim 20, wherein the instructions when executed cause
2 the controller to communicate Session Initiation Protocol messages in traffic channels of the
3 wireless network.

1 24. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate the Session Initiation Protocol messages in PDTCH bursts of a
3 General Packet Radio Services system.

1 25. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate a Session Initiation Protocol Invite message.

1 26. (Original) The article of claim 25, wherein the instructions when executed cause
2 the controller to receive response messages to the Invite message.

1 27. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate a Session Initiation Protocol Bye message to release a call.

1 28. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate messages to provide a supplementary service.

1 29. (Currently Amended) A mobile station for use in a wireless communications
2 system having base stations, comprising:

3 a storage element storing a predetermined code associated with packet-switched
4 calls; and

5 a controller to send control signaling to one of the base stations over a wireless
6 link to set up a packet-based packet-switched call,

7 the control signaling containing the predetermined code, the predetermined code
8 to identify the call as a packet-switched call.

1 30. (Currently Amended) The mobile station of claim 29, wherein the control
2 signaling comprises a random access channel, the random access channel containing the
3 predetermined code.

1 31. (Currently Amended) The mobile station of claim 30, wherein the random access
2 channel comprises a packet random access channel, the packet random access channel containing
3 the predetermined code.

1 32. (Currently Amended) The mobile station of claim 31, wherein the packet random
2 access channel comprises a COMPACT packet random access channel, the COMPACT packet
3 random access channel containing the predetermined code.

1 33. (Cancelled)

1 34. (Currently Amended) ~~The radio network control system of claim 33 A radio~~
2 network control system, comprising:

3 an interface to a wireless link capable of communicating with a mobile station;

4 and

5 a controller adapted to receive a request to set up a packet-switched call over the
6 wireless link,

7 the controller further adapted to assign a logical channel combination in response
8 to the request,

9 wherein the logical channel combination comprises TCH + FACCH + SACCH +
10 PDTCH + PACCH + PTCCCH.

1 35. (Currently Amended) The radio network control system of claim 34, wherein the
2 controller is adapted to communicate Session Initiation Protocol messages [[are]] in PDTCH
3 bursts.

1 36. (Original) The radio network control system of claim 34, wherein the controller
2 is adapted to communicate a success indication of a packet-switched call session in a PACCH
3 burst.

1 37. (Original) The radio network control system of claim 34, wherein the controller
2 is adapted to communicate radio resource management signaling in a PACCH burst to indicate a
3 state of the packet-switched call.

1 38. (Original) A data signal embodied in a carrier wave and containing instructions
2 that when executed cause a system in a wireless network to:

3 receive control signaling to set up a packet-switched call over the wireless
4 network, the control signaling carried in a first traffic channel; and
5 establish the packet-switched call over the wireless network.

1 39. (Original) The data signal of claim 38, wherein the instructions when executed
2 cause the system to further communicate bearer data in a second traffic channel.

1 40. (Original) The data signal of claim 39, wherein the control signaling is carried in
2 a PDTCH and the bearer data is carried in a TCH.

1 41. (Original) The data signal of claim 38, wherein the instructions when executed
2 cause the system to further communicate bearer data in the first traffic channel.

1 42. (New) The method of claim 1, wherein communicating the control signaling in
2 the traffic channel comprises communicating a control message in the traffic channel, the control
3 message according to a protocol for establishing a packet-switched call over an Internet Protocol
4 network.

1 43. (New) The data signal of claim 38, wherein receiving the control signaling
2 comprises receiving a Session Initiation Protocol message carried in the first traffic channel.

1 44. (New) The data signal of claim 38, wherein receiving the control signaling
2 comprises receiving a control message carried in the first traffic channel, the control message
3 according to a protocol for establishing a packet-switched call over an Internet Protocol network.

1 45. (New) The article of claim 21, wherein the predetermined code comprises a
2 mobile station code.